

Enhancing Education Through Technology (EETT) Competitive Sub-grant Application Assurance Sheet

Project Title: Making a Difference in Math Achievement Amount of Request: \$ \$75,000
 District Name (Fiscal Agent for Consortiums): Orofino Jt District Number: 171
 Please list the school name, and indicate whether it is a targeted school or a partner school and
 certify the CIPA compliance for all participating schools within the project:

Dist. # or 'P' for Private School	School Name	This school is a targeted school 'T' or a partner school 'P'.	This school is in compliance with the CIPA as outlined on page 3 of the guidance document.
171	Orofino Elementary School	<input checked="" type="radio"/> T <input type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
171	Orofino High School	<input checked="" type="radio"/> T <input type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
171	Orofino Junior High School	<input checked="" type="radio"/> T <input type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
171	Timberline School	<input checked="" type="radio"/> T <input checked="" type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
171	Peck Elementary School	<input type="radio"/> T <input checked="" type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
171	Cavendish Elementary School	<input type="radio"/> T <input checked="" type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
		<input type="radio"/> T <input type="radio"/> P	<input type="radio"/> YES <input type="radio"/> NO
171	*Weippe Elementary School	<input checked="" type="radio"/> T <input type="radio"/> P	<input checked="" type="radio"/> YES <input type="radio"/> NO
	students are attending Timberline	<input type="radio"/> T <input type="radio"/> P	<input type="radio"/> YES <input type="radio"/> NO
	School for the 2007-2008 school	<input type="radio"/> T <input type="radio"/> P	<input type="radio"/> YES <input type="radio"/> NO
	year	<input type="radio"/> T <input type="radio"/> P	<input type="radio"/> YES <input type="radio"/> NO
		<input type="radio"/> T <input type="radio"/> P	<input type="radio"/> YES <input type="radio"/> NO

I certify that we have contacted the charter and private schools in our area about participation in this grant.

Superintendent Name <i>Dale Durkee</i>	E-mail <i>durkeed@sd171.k12.id.us</i>	Telephone <i>208-476-5573</i>
Signature <i>Dale Durkee</i>		
District Technology Coordinator Name <i>Sylvia Stevens</i>	E-mail <i>stevens@sd171.k12.id.us</i>	Telephone <i>208-476-4810</i>
Signature <i>Sylvia Stevens</i>		
Project Director Name (if different than District Technology Coordinator)	E-mail	Telephone
Signature		

Making a Difference in Math Achievement

Abstract

Project Goal: Improve Student Achievement in Math By Increasing the Ability of Math Teachers to deliver engaging instruction using appropriate technology tools.

An analysis of student achievement and demographic data shows Orofino Jt School District 171 faces numerous challenges in developing and teaching a math curriculum which ensures increased student achievement in Math. 81% of students in Orofino Jt School District 171 attend **schools which did not achieve adequate yearly progress in math** as measured by the Spring 2007 Math ISAT. These schools failed to achieve AYP in overall math proficiency, white math proficiency, economic math proficiency, and reducing the percentage of students scoring below basic in math. This disturbing trend appears to be continuing as an estimated 35% of secondary Math students received below average (D or F) grades on their 2007-08 1st quarter report cards.

This project, **Making a Difference in Math Achievement**, falls under the umbrella of a district-wide school improvement initiative to improve student math achievement. District-wide Math Initiative goals include improving math instruction through intensive and sustained professional development, purchasing research-based math curriculum materials, mapping math curriculum, and using existing and newly acquired technology tools to provide appropriate, engaging learning experiences for all math students.

This project includes specific measurable goals, objectives, and activities which address the professional development and technology integration component of the district-wide Math Improvement Initiative. Twenty-seven (27) K-12 math teachers in Orofino Jt School District 171 will **"Increase student academic performance on statewide Math assessments"** (School Improvement Plan Goal #4:) through the effective integration of technology into Math curricula and instruction.

"Participating in staff development opportunities that address implementation of research-based curricula in math"(School Improvement Goal #4: Objective 1) will improve the capacity of teachers to integrate technology effectively into the curricula. Specifically, 27 Orofino Jt. School District 171 Math teachers will be trained to....

- Use an LCD projector and wireless CPS Chalkboard to teach engaging math lessons designed using research-based qualities of good instruction.
- Use Plato Math Curriculum and/or Plato ISAT Correlated Remediation for group instruction, individualized instruction, and/or to address specific math deficiencies.

Extending the project vision--Teachers treasure the intrinsic rewards that come when student achievement meets or exceeds established benchmarks. Excellence in integrating technology effectively into the curricula is infectious. When a successful model for technology integration is available, teachers in all curriculum areas are motivated to improve their technology integration skills.

**Making a Difference in Math Achievement
Educational Need**

Academic Need--81% of students in Orofino Jt School District 171 attend schools which **did not achieve adequate yearly progress in math**. Data shows that schools integrating the Plato curriculum into regular math curriculum met AYP while schools with little use of the Plato curriculum did not make AYP in math.

AYP Status of Schools in Orofino Jt School District 171		
School	AYP Math Status	Plato Curriculum Use
Orofino High School	On Alert for Math Proficiency, White Math Proficiency, Econ Math Proficiency	17 hours Used by 1 student
Orofino Junior High	On Alert for Math Proficiency, White Math Proficiency, Econ Math Proficiency	288 hours Used by 57 students
Orofino Elementary	On Alert--Failure to reduce the number of students who are below basic in Math	684 hours Used by 38 students
Weippe Elementary	On Alert for Math Proficiency, White Math Proficiency, Econ Math Proficiency	911 hours Used by 89 students (used mainly by after-school program)
Pierce Elementary	Met AYP	611 hours Used by 43 students
Peck Elementary	Met AYP	700 hours Used by 18 students
Cavendish Elementary	Met AYP	473 hours Used by 18 students
Timberline High School	Met AYP	1092 hours Used by 42 students

Spring 2007 Math ISAT Results by Grade Level								
Grade	3	4	5	6	7	8	9	10
% of students with basic or below basic scores on Spring 2007 Math ISAT	14.3%	10.1%	24%	26.8%	34.3%	35.1%	27%	29.8%

The disturbing trend of low math achievement appears to be continuing as an estimated 35% of secondary Math students received below average (D or F) grades on their 2007-08 1st quarter report cards.

Direct Math Assessment data show 70% of 6th grade students not proficient in Math. An isolated statistic of great concern is a class of 6th graders-- none (0%) of whom received a passing score on the 2006-2007 Direct Math Assessment.

2006-07 Direct Math Assessment Results	Grade 4	Grade 6	Grade 8
% of students scoring not proficient on Idaho DMA	22%	70%	63%

Demographic Data:

Orofino Jt. School District 171 serves students from the communities of Orofino, Weippe, Pierce, Greer, Peck, Cavendish, and Ahsahka. School boundaries cover most of Clearwater County and small portions of Lewis and Nez Perce counties. More than 65% of the area within school district boundaries is owned and managed by government agencies.

Approximately 1,300 students attend 6 area schools, including one-room schools in the communities of Peck and Cavendish. Since 1971, student enrollment has declined over 50%. The resulting drop in funding from reduced enrollment and a stagnant logging industry forced the Orofino Jt. District to a four-day week for students.

Clearwater County consistently has the highest unemployment rate in the state. More than half of the students districtwide qualify for free and reduced lunch. The free and reduced lunch percentage at some schools often exceeds 85%. 91% of the student are white, 4% Native American, 3% Hispanic, 1% Black, and 1% Asian.

Since the beginning of the 2007-08 school year, 125 students enrolled and 108 unenrolled. Only 41% of the 113 students in Grade 10 have attended Orofino Jt. District schools continuously since enrolling in kindergarten. 645 students ride 18 buses an average of 17,500 miles per month to get to and from school. Some students get on the bus between 6:10 and 6:15 am each morning and get home in the afternoons between 4:30 and 5 pm. Bus routes cover areas with rugged terrain, narrow roads, snow conditions, many miles of graveled roads, and steep grades.

Buildings report a 2007 1st quarter attendance rate of 93%. There were 595 reports of insubordination during 2006-2007 school year

Technology Need—High Speed Internet is not available for all schools in Orofino Jt. School District 171. This causes frequent dropped connections when using the Internet. Lack of high speed internet bandwidth has been an on-going problem for the last 10 years. The Idaho Public Utilities Commission is finally requiring Verizon to upgrade telecommunications services in Clearwater County. Projected Completion Date: 2010

Making a Difference in Math Achievement Local Project Detail

As a result of the four-day school week, 9 collaboration Fridays and 4 inservice days are included in the school calendar. This project involves 27 math teachers in grades K-12 representing both target and partner schools in Orofino Jt. School District 171. Activities include:

- 4 days of professional development provided by outside trainers.
- 4 half-days of math collaboration time facilitated by math technology mentor teachers.
- 2 one-on-one collaboration/training sessions with each grant participant provided by math technology mentor teachers.

Project coordination is provided by the District Technology Director. This project was discussed and approved by the school district leadership team at its November 13, 2007 meeting.

Project Rationale: **Teachers who participate in technology literacy and technology integration professional development are more likely to teach using engaging instruction.

 **Students taught with engaging instruction achieve at a higher levels than their peers who receive traditional instruction.

 **Plato Web Learning Network can be used to provide engaging group or individualized instruction.

 ** only 6 out of 90 certified staff currently use wireless Chalkboards and LCD projectors to provide engaging instruction.

Goal 1: Increase student academic achievement in math by providing high-quality, ongoing, intensive professional development in the use of technology tools (LCD projectors, wireless CPS Chalkboards, and Plato Web Learning Network.)

 Timeline: April 2008-May 2009

 Measure: % of students scoring proficient or advanced on the Spring 2008 and Spring 2009 Math ISAT. Target: 4% increase each year.

Obj 1: Increase the number of math teachers who participate in technology literacy and/or technology integration professional development activities.

 Timeline: April 2008-June 2009

 Measure: Number of math teachers who participate in professional development activities outlined below. Target: 27 math teachers will participate in all outlined activities

 Activity 1: April 2008--One day training on using LCD projectors and wireless CPS Chalkboards.

 Activity 2 September 2008--One day training using Plato Web Learning Network.

Results from Spring 2008 ISAT are analyzed and Plato assignments are made for students scoring basic or below basic in math.

Activity 3: November 2008--Math teachers meet for ½ day with mentor teachers for review of grant goals and objectives. Math teachers collaborate on effective uses of technology in math instruction.

Activity 4: December 2008--One day followup training on using LCD Projectors and CPS Chalkboard. Specific uses of LCD projectors and CPS Chalkboards in math instruction demonstrated by trainer and grant participants.

Activity 5: February 2009--One day followup training on using Plato Web Learning Network software. Training includes discussion about technology-related solutions for students who received Ds or Fs 1st semester in math.

Activity 6: April 2009--Math teachers meet for ½ day with mentor teachers for review of grant goals and objectives. Math teachers demonstrate effective uses of technology in math instruction.

Activity 7: Jan-May 2009--Two (2) One-on-one collaboration activities grant participants and math technology mentor teachers.

Obj 2: Increase the ability of math teachers to improve student math achievement through the use of technology. (In other words, collect evidence on the effectiveness of professional development training provided in Obj: 1)

Timeline: November 2008-May 2009

Measure: **% of math teachers using wireless CPS Chalkboard and LCD projectors as a tool to provide engaging instruction which improves student academic achievement in Math. Targeted Increase: 27 math teachers

Activity 1: March/April 2009--Video tape math teachers using technology in their classrooms.

Measure: **% of students receiving below average (D or F) Math grades.
Target: 10% reduction

Activity 2: November, January, March, June--Document the number of math students using Plato Web Learning Network as compared to Ds and Fs given in math.

✓ Did we meet the Goal to Increase student academic achievement in math by providing high-quality, ongoing, intensive professional development in the use of technology tools?

Extending the project vision-

**Document the number of teachers who, although not able to participate in this grant, request CPS Chalkboards and LCD projectors for their classroom.

**Document the % of teachers district-wide in all subject areas who use technology to improve student academic achievement by providing engaging technology-enriched lessons.

Making a Difference in Math Achievement **Sustainability**

This project is one component in a multi-year district-wide initiative to improve math instruction and increase student achievement in Math. Technology tools, properly used to provide engaging instruction, monitor student progress and adjust instruction, and evaluate student math achievement, are recognized by district administrators and the board of education as essential to the success of the district-wide math initiative.

Improved student academic achievement through the use of technology is sustained in the following ways:

- Collaboration time is built into the school district calendar each year. Knowledge and skills gained through technology integration professional development continue as grant participants and math technology mentor teachers model effective integration of technology and collaborate with their peers.
- Up-to-date information on using CPS Chalkboards and Plato Web Learning Network is provided free of charge on web sites maintained by CPS Chalkboard and Plato trainers.
- Equipment replacement budgets are established to maintain and upgrade the equipment purchased with grant funds. Equipment replacement money is included in district budgets each year.
- Technology support personnel are available to provide continuing technical support of the equipment purchased with grant funds.
- Findings from this project will be reviewed as part of the process for developing the yearly School District Improvement Plan and Information Technology components of the School District Improvement Plan.

Making a Difference in Math Achievement
Budget Narrative
 (2 pages)

Description:	Cost:
2 days of Plato Training for 27 Math Teachers: Goal 1, Objective 1, Activity 2–September 2008 Goal 1, Objective 1, Activity 5–February 2009 2 days @ \$1,500 per day	\$3,000
2 days of CPS Chalkboard training for 27 Math Teachers: Goal 1, Objective 1, Activity 1–April 2008 Goal 1, Objective 1, Activity 4–December 2008 2 days @ \$1,500 per day	\$3,000
3 Math Mentor Teacher Honorariums: Provides support for all project activities: (See activities list in Local Project Detail) 3 honorariums @ \$3,500 each	\$10,500
Hire Substitutes for Math Mentor Teachers for one-on-one collaboration activities with grant participants. 5 days for each of the 3 math mentor teachers Total 15 days @ \$90 per day	\$1,350
Supplies/snacks for 8 collaboration/training activities 8 days @ \$120 per day	\$ 960
Expenses to attend one-day evaluation in-service in Boise includes travel, per diem, and hotel for 2 people	\$ 770
Professional Development Subtotal \$19,580 (exceeds the 25% grant requirement for professional development)	
Technology tools for integrating technology into the curriculum: 27 LCD projectors @ \$744 each	\$20,088
Technology tools for integrating technology into the curriculum: 27 CPS Chalkboards @ \$316 each	\$8,532
(Budget Narrative continued on next page)	

Making a Difference in Math Achievement

Budget Narrative

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<p>Technology tools for integrating technology into the curriculum: Plato Web Learning Network Caching Servers for Orofino Elementary, Orofino Junior High, Orofino High School and Timberline School: 4 Plato caching servers@ \$6,700 each</p> <p>Plato Web Learning Network Caching Servers are the only avenue by which students attending schools who do not have access to high speed internet can use the Plato Web Learning Network. Technology Need—High Speed Internet is not available for all schools in Orofino Jt. School District 171. This causes frequent dropped connections when using the Internet. The Idaho Public Utilities Commission is finally requiring Verizon to upgrade telecommunications services in Clearwater County. Projected Completion Date: 2010. District funds were used to purchase up-to-date computers so all students can access to Plato Web Learning Network when cache servers are installed.</p>	<p>\$26,800</p>
<p>Total Grant Request</p>	<p>\$75,000</p>